

WHAT IS CLAIMED IS:

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1. A live vaccine for human immunodeficiency virus
(HIV) comprising a recombinant plasmid containing a gene required
5 for surface exposure and a gene encoding a human
immunodeficiency virus protein.

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2. The vaccine of claim 1, wherein said gene required
10 for surface exposure encodes *E. coli*-lipoprotein signal sequence
linked to a portion of the *E. coli* outer membrane protein ompA.

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3. The vaccine of claim 1, wherein said gene encoding
15 a human immunodeficiency virus protein is selected from the group
consisting of reverse transcriptase and transactivating protein.

4. The vaccine of claim 1, wherein said recombinant
20 plasmid is electroporated into an attenuated bacterial host.

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5. The vaccine of claim 4, wherein said attenuated bacterial host is a strain of *Salmonella typhimurium*, SL3261.

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6. A method of initiating immune responses specific for human immunodeficiency virus antigens in an individual in need of such treatment comprising the step of administering said individual with the vaccine of claim 1.

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7. The method of claim 6, wherein said human immunodeficiency virus antigen is selected from the group consisting of reverse transcriptase and transactivating protein.

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8. The method of claim 6, wherein said immune responses comprises a mucosal IgA response and a helper T cell response.

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9. The method of claim 6, wherein the live vaccine is administering orally.

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5 10. The method of claim 6, wherein vaccine is administered in an oral dose of from about 10^{12} to about 10^{14} CFU (colony forming unit).

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